

ARTICLE VII: SECTION 30-7-1
WATER SUPPLY WATERSHED DISTRICTS

30-7-1 WATER SUPPLY WATERSHED DISTRICTS

30-7-1.1 District Descriptions

Two overlay districts cover designated water supply watersheds. They are the Watershed Critical Area (WCA) and the General Watershed Area (GWA). The WCA covers the area adjacent to a water supply intake or reservoir where risk associated with pollution is greater than from the remaining portions of the watershed. No portion of the WCA outer boundary is closer than one-half (1/2) mile to the normal pool elevation of an existing or proposed designated reservoir. The GWA covers the rest of the watershed draining to the reservoir or intake.

30-7-1.2 Incorporation of Designated Water Supply Watershed Map(s)

This Section incorporates by reference the Greensboro Designated Water Supply Watershed Basin Map, dated January 1, 2000, showing Watershed Critical Areas and General Watershed Areas of the following: Greensboro (Reedy Fork Creek), Upper Randleman Lake (East and West Forks of Deep River, which drain into High Point City Lake and Oak Hollow Lake), Lower Randleman Lake (Deep River) Lake Mackintosh (Big Alamance Creek), and Polecat Creek watersheds.

30-7-1.3 Applicability

(A) Coverage:

- 1) This Section 30-7-1 (Water Supply Watershed Districts) applies to all sites containing new development in the Watershed Critical Area or General Watershed Area, including grading, paving, gravel placement, and construction of buildings and other structures, except for the exempt activities listed in Section 30-7-1.3(B) below. Section 30-7-2 (General Watershed Areas) and Section 30-7-3 (Watershed Critical Areas) impose additional requirements specific to the overlay district.
- 2) The construction of new streets by local government shall comply with best management practices developed in response to the City of Greensboro's EPA-NPDES Stormwater Management Program, which is incorporated herein by reference.
- 3) Widening of existing streets and the installation of sidewalks shall comply with the provisions of this Article to the extent practicable. When it is determined by the Enforcement Officer that the provisions of these sections cannot be met, the widening of existing streets and the installation of sidewalks shall comply with best management practices developed in response to the City of Greensboro's EPA-NPDES Storm- water Management Program.

(B) Exempt Activities:

The following activities are exempt from the plan submission and approval requirements of this Section. However, any restrictions upon building location, drainageways, pavement, or other built-upon area, or

any other matter appearing on any previously approved watershed development (watershed control) plan covering the subject property, shall be complied with unless and until replaced by an approved revised plan.

- 1) Construction of a single family dwelling and its accessory structures on a zone lot outside WCA Tiers 1 and 2.
- 2) Replacement of existing built-upon area with a like or lesser amount of new built-upon area at the same location, or at a different location on the same zone lot if the Enforcement Officer has determined that equal or improved water quality will result.
- 3) Except as provided in subsection 1) above, placement of small accessory buildings or structures or small amounts of other built-upon area provided that the total additional built-upon area is no greater than four hundred (400) square feet and the additional built-upon area is not placed within a required stream buffer. This exemption shall apply to a zone lot for one time only after June 30, 1993.
- 4) Existing development until such time as new development is initiated on the site.

30-7-1.4 Participation in a public regional stormwater control program

(A) Where Permitted: Where a regional stormwater control program has been established by one or more local governments, or by an authority operating on behalf of one or more local governments, a development may participate in said program in lieu of any certification of stormwater control required by this Article, provided that:

- 1) The development is within an area covered by a public regional stormwater control program;
- 2) Stormwater from the development drains to an existing or funded public regional engineered stormwater control which is part of said program;
- 3) Participation is in the form of contribution of funds, contribution of land, contribution of engineered stormwater control construction work, or a combination of these, the total value of which shall be in accordance with a fee schedule adopted by the City Council; and
- 4) The Technical Review Committee finds that the watershed development plan is in compliance with all other applicable requirements of this Article.

(B) Use of Contributions:

Each contribution from a development participating in a public regional engineered stormwater control program shall be used for acquisition, design, or construction of one or more such controls in the same water supply watershed in which the development is located.

30-7-1.5 Watershed Development Plan

(A) Plan Required:

- 1) For a two-family dwelling on a zone lot, a plot plan showing all proposed built-upon area, not to exceed 3,000 square feet, shall suffice in a GWA or WCA.
- 2) For all other new development in a GWA, a watershed development plan in accordance with the performance standards specified in Table 30-7-2-1 and with other requirements of Sections 30-7-1 and 30-7-2 shall be submitted to the Enforcement Officer.
- 3) For all other new development in a WCA, a watershed development plan in accordance with the requirements of Sections 30-7-1 and 30-7-3 shall be submitted to the Enforcement

Officer.

4) Plans shall include all applicable information listed in Appendix 2 (Map Standards) of this Ordinance.

(B) Plan Approval:

The Technical Review Committee is authorized to approve watershed development plans which conform with the requirements of this Ordinance.

(C) Approved Plan a Prerequisite:

The Enforcement Officer is not authorized to issue any permits, except as provided in Section 30-3-4.2 (Permits Issued Prior to Site Plan or Preliminary Plat Approval), for development on any land in a WCA or GWA unless and until a watershed development plan in compliance with the requirements of this Section has been approved.

(D) Permanent Engineered Stormwater Controls:

When a permanent engineered stormwater control is required for a development to meet the requirements of this Article, a North Carolina registered professional engineer shall prepare the plan with the Engineer's Certification of Stormwater Quality Control from Table 30-7-1-5 affixed, signed, sealed, and dated.

30-7-1.6 Improvements

(A) Design of Improvements:

1) Design of improvements shall:

- a) Be performed by a North Carolina registered professional engineer;
- b) Be subject to approval by the Enforcement Officer; and
- c) Meet or exceed the guidelines in the Watershed Manual.

2) The Enforcement Officer may recommend, and the Technical Review Committee may require, that a given engineered stormwater control be positioned on a site such that water quality protection is improved.

(B) Construction of Watershed Protection Improvements:

1) See Section 30-6-9.2(F) (Plat recordation) if improvements are pursuant to a watershed development plan that was a prerequisite to a subdivision approval.

2) The construction of all improvements designed for watershed protection and shown on other approved watershed development plans shall be substantially completed, have full design volume available, and be functioning properly prior to any pond plat recordation or issuance of any building certificate of compliance.

3) Final approval of installed engineered stormwater controls shall be required at finalization of the grading permit or at issuance of the final building certificate of compliance, whichever comes later. If neither a building permit nor a grading permit is required for a site, then any such engineered stormwater control shall be substantially completed and have full design volume

available prior to installation of any built-upon area on the site. An engineer's certification of completion (Table 30-7-1-6) shall be required prior to final approval by the Enforcement Officer.

(C) Recordation of Permanent Improvements: All permanent engineered stormwater controls and associated access/maintenance easement(s) (specific or general, at the owner's option) shall be recorded on a Pond Plat, and a mechanism to ensure their maintenance shall be established concurrent with or prior to plat recordation.

(D) Maintenance Responsibility:

1) When engineered stormwater controls serve more than one lot, an owners' association or binding contract for the purpose of maintenance shall be required. See Section 30-6-9.2 (Permanent Engineered Stormwater Controls in subdivisions).

2) Maintenance of engineered stormwater controls shall be performed at such time as the designated sediment storage volume of the structure has been lost to sediment or a part of the installation is not functioning as originally designed. The Enforcement Officer shall have the responsibility to inspect such structures annually, to record the results on forms approved or supplied by the NC Division of Water Quality, and to notify the responsible property owner or owners' association when maintenance or repairs are required. All required repairs and maintenance shall be performed within ninety (90) days after such notice. In case of failure by the responsible party to perform the required maintenance or repairs within the stated period, the City may perform such maintenance or repairs and recover all costs attendant thereto from the property owner or owners' association.

30-7-1.7 Clustering

(A) Clustering Encouraged: Clustering of residential development is encouraged. Clustering of single family detached development is allowed under the provisions of Section 30-4-6.1(B) (Single Family Detached Cluster Development). Multifamily development may be clustered so long as the development complies with the standards of Section 30-4-6.2 (Multifamily Districts).

(B) Performance Requirements: Clustering is allowed if the overall density of the project meets the applicable GWA or WCA density and stormwater runoff control requirements, the built-upon areas are designed and sited to minimize stormwater runoff impact to the receiving waters and minimize concentrated stormwater flow, and the remainder of the tract remains in a vegetated or natural state.

(C) Additional Performance Requirements in Lower Randleman Lake Watershed:

1) Development shall maximize the use of sheet flow through vegetated areas and shall maximize the flow length through vegetated areas.

2) Areas of concentrated development shall be located in upland areas and away, to the maximum extent practicable, from surface waters and drainageways.

3) The remainder of the tract to remain in a vegetated or natural state shall be conveyed to a property owners' association, conveyed to a local government for preservation as a park or

greenway, conveyed to a conservation organization, or placed in a permanent conservation or farmland preservation easement. A document recorded at the Register of Deeds shall require maintenance of the vegetated or natural area.

30-7-1.8 Stream Buffer Required

(A) Stream Buffer Widths: In the WCA and the GWA, stream buffers containing zones and widths as specified in Table 30-7-1 (Stream Buffer Zone and Width Requirements in Upper and Lower Randleman Lake Watersheds) and Table 30-7-2 (Stream Buffer Width Requirements in Other Water Supply Watersheds) below, shall be maintained (see Section 30-7-3 (Watershed Critical Area Requirements) for additional requirements concerning stream buffers in the WCA).

(B) Relationship to Requirements of Chapter 27: Where stricter stream buffer requirements are present in section 27-22(f) (Stream Buffer Requirement), the stricter requirements shall apply.

(C) Stream Channelization: In a GWA or WCA approved from the Technical Review Committee shall be secured before any intermittent or perennial stream is channelized. If the stream is perennial, it shall not be channelized without prior approval by the Planning Board.

(D) Explanation of Randleman Zones and Other Stream Buffers: Stream buffers in the Upper and Lower Randleman Lake watersheds may be composed of two or three of the following zones, depending upon whether the low density option or the high density option is used. Stream buffers required in other (non-Randleman) water supply watersheds are not broken into zones:

1) Randleman Zone 1 is the proportion of a riparian protection area, required in the Upper and Lower Randleman Lake Watersheds, located closest to the stream. It is intended to be an undisturbed area of vegetation.

2) Randleman Zone 2, the remainder of a riparian protection area, is intended to provide protection through a vegetated riparian zone which provides for diffusion and infiltration of runoff and filtering of pollutants.

3) Randleman Zone 3 is not part of a riparian protection area and therefore is subject to less extensive requirements than are Randleman Zones 1 and 2. Randleman Zone 3 covers the outermost fifty (50) feet of one hundred (100) foot perennial stream buffers under the high density option in the Upper and Lower Randleman Lake watersheds.

4) A non-Randleman stream buffer covers the entire perennial stream buffer, be it thirty (30) feet under the low density option or one hundred (100) feet under the high density option, in other water supply watersheds.

TABLE 30-7-1 STREAM BUFFER ZONE AND WIDTH* REQUIREMENTS IN UPPER AND LOWER RANDLEMAN LAKE WATERSHEDS						
LOW DENSITY OPTION						
Watersheds	Perennial Streams, Lakes & Ponds			Intermittent Streams		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Upper & Lower Randleman Lake	0-30	30-50	N/A	0-30	30-50	N/A
HIGH DENSITY OPTION						
Watersheds	Perennial Streams, Lakes & Ponds			Intermittent Streams		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Upper & Lower Randleman Lake	0-30	30-50	N/A	0-30	30-50	N/A

TABLE 30-7-2 STREAM BUFFER WIDTH* REQUIREMENTS IN OTHER WATER SUPPLY WATERSHEDS		
LOW DENSITY OPTION		
Watersheds	Perennial Streams, Lakes & Ponds	Intermittent Streams
Greensboro	0-30	N/A
Lake Mackintosh	0-30	N/A
Polecat Creek	0-30	N/A
HIGH DENSITY OPTION		
Watersheds	Perennial Streams, Lakes & Ponds	Intermittent Streams
Greensboro	0-100	N/A
Lake Mackintosh	0-100	N/A
Polecat Creek	0-100	N/A

*Distances on all sides of water bodies are in feet and are with reference to top of bank for streams and normal pool elevation for all other water bodies. Thus, "0" equals top of bank or normal pool elevation and "30" equals 30 feet landward from top of bank of normal pool elevation.

(E) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 1

1) Natural regeneration of forest vegetation and planting vegetation to enhance the riparian area if disturbance is minimized, provided that any planting shall primarily consist of locally native trees and shrubs;

2) Selective cutting of individual trees, when forest vegetation as defined in Rule .0202 of the EMC Rules exists, as long as the following conditions are met every one hundred (100) feet on each side of the stream:

a) Of existing trees twelve (12) inches and greater in diameter breast height (dbh), a minimum of five (5) trees must remain uncut;

b) Trees twelve (12) inches and greater dbh may be harvested based on the following equation: Number of Trees Harvested = (Total Number of Trees Greater than 12 Inches dbh - 5)/2;

c) No trees less than twelve (12) inches dbh may be harvested unless exceptions provided in this section are met;

d) Trees may not be harvested more frequently than every ten years; and

e) No tracked or wheeled equipment is allowed.;

3) Horticulture or silvicultural practices to maintain the health of individual trees;

4) Removal of individual trees which are in danger of causing damage to dwellings, other structures, or the stream channel;

5) Removal of dead trees and other timber cutting techniques necessary to prevent extensive pest or disease infestation if recommended by the Director, NC Division of Forest Resources and approved by the Director, NC Division of Water Quality;

6) Ongoing agricultural operations provided that existing forest vegetation is protected;

7) Water dependent structures, road crossings, driveway crossings, railroad crossings, bridges, airport facilities, utility crossings, stream restoration projects, scientific studies, stream gauging, and passive recreation facilities such as boardwalks, trails, pathways, historic preservation and archeological activities where no practical alternative exists. These structures shall be located, designed, constructed, and maintained to have minimal disturbance, to provide maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to the maximum extent practical through the use of the best management practices; and

8) Stream crossings associated with timber harvesting, if performed in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J .0201-.0209).

(F) Practices and Activities Not Allowed in Randleman Zone 1:

- 1) Land-disturbing activities and placement of fill and other materials, other than those allowed elsewhere in this Section;
- 2) New development, except as allowed elsewhere in this Section;
- 3) New on-site sanitary sewage systems which use ground absorption;
- 4) Application of fertilizer; and
- 5) Any activity that threatens the health and function of the vegetation, including but not limited to, the application of chemicals in amounts exceeding the manufacturer's recommended rate, deposition of sediment from uncontrolled sediment sources on adjacent lands, and creation of any areas with bare soil.

(G) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 2:

- 1) All those permitted in Randleman Zone 1;
- 2) Periodic mowing and removal of plant products such as timber, nuts, and fruit, provided the purpose of the riparian area is not compromised by harvesting, disturbance, or loss of forest and herbaceous ground cover;
- 3) Grading and timber harvesting, provided that vegetative ground cover is established immediately following completion of land-disturbing activity;
- 4) Stormwater management facilities and ponds;
- 5) Corridors for the construction and management of utility lines, such as water, sewer, or gas (including access roads and stockpiling of materials) running parallel to the stream, as long as no practical alternative exists and best management practices are used to minimize runoff and maximize water quality protection to the maximum extent practicable. Permanent, maintained access corridors shall be restricted to the minimum width practicable and shall not exceed ten (10) feet by ten (10) feet perpendicular vehicular turnaround shall be allowed provided they are spaced at least five hundred (500) feet apart along the riparian area; and
- 6) Stream restoration projects, scientific studies, stream gauging, water wells, and passive recreation facilities such as boardwalks, trails, pathways, historic preservation, and archaeological activities, provided they are designed, constructed, and maintained to provide the maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to the maximum extent practicable through the use of best management practices.

(H) Practices and Activities Not Allowed In Randleman Zone 2:

- 1) New development, other than that allowed elsewhere in this Section; and

2) Those uses listed in Sections 30-7-1.8 (F)(3) and (5) above.

(I) Timber Removal in Randleman Zones 1 and 2: Timber removal and skidding of trees shall be directed away from the water course or water body. Skidding shall be done in a manner to prevent the creation of ephemeral channels perpendicular to the water body. Any tree removal must be performed in a manner that does not compromise the purpose of the riparian area and is in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J .0201 - .0209).

(J) Maintenance of Sheet Flow in and Entering Randleman Zones 1 and 2:

1) Sheet flow must be maintained to the maximum extent practical through dispersing concentrated flow and re-establishment of vegetation to maintain the effectiveness of the riparian area.

2) Concentrated runoff from new ditches or manmade conveyances must be dispersed into sheet flow before the runoff enters Randleman Zone 2 of the riparian area. Care shall be taken to minimize pollutant loading through existing ditches and manmade conveyances from fertilizer application or erosion.

3) Periodic corrective action to restore sheet flow shall be taken by the landowner if necessary to impede the formation of erosion gullies which allow concentrated flow to bypass treatment in the riparian area.

(K) Maintenance of Modified Natural Streams in Randleman Zones 1 and 2: Periodic maintenance of modified natural streams such as canals is allowed provided that disturbance is minimized and the structure and function of the riparian area is not compromised. A grassed travelway is allowed on one side of the water body when alternative forms of maintenance access are not practical. The width and specifications of the travelway shall be only those needed for equipment access and operation. The travelway shall be located so as to interfere as little as practical with stream shading.

(L) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 3 and in Non-Randleman Stream Buffers:

1) All those permitted in Randleman Zone 2, and

2) Water dependent structures, public projects such as street, railroad and driveway crossings, airport facilities, utility crossings and corridors, and stormwater management facilities and ponds may be allowed where no practicable alternative exists. Installation of these structures shall minimize built-upon area, divert runoff away from surface waters, and maximize the utilization of best management practices.

(M) Structures and Uses Not Allowed in Randleman Zone 3 and in Non-Randleman Stream Buffers: No new built-upon area, other than that permitted in Section 30-7-1.8 (L) above, is allowed.

(N) Platting of Stream Buffers: Subdivision plats and pond plats shall show each stream buffer and Randleman zone applicable to the property.

(O) Alternatives to the Maintenance of Riparian Protection Area Buffers: The alternatives listed in this Section are established to accommodate situations where a buffer would otherwise be required, but where it can be demonstrated that there is no practical alternative to the loss of the buffer in spite of efforts to avoid such loss. This is intended to allow, in such situations, compensatory mitigation in lieu of complying with Ordinance requirements that riparian buffers be protected and maintained. Technical Review Committee approval is a prerequisite to the use of any alternative for any property. Expenditure of collected fees shall occur on property in the same river basin as the riparian buffer that is lost. Each other alternative measure shall occur on property in the Upper Cape Fear river basin. Alternatives shall include, but are not limited to:

1) Payment of compensatory mitigation fee, according to the fee schedule, into the Riparian Buffer Restoration Fund managed by the NC Division of Water Quality;

2) Donation of real property or an interest in real property to the NC Department of Environmental and Natural Resources, another state agency, the City of Greensboro, or a private, non-profit conservation organization if both the donee organization and the donated real property or interest in real property are approved by the Technical Review Committee. The donee organization shall be approved only if the donee agrees to maintain the real property or interest in real property as a riparian buffer. The Technical Review Committee may approve a donation only if the donation:

a) Is a riparian buffer that will provide protection of water quality that is equivalent or greater than that provided by the riparian buffer that is lost; or

b) Will be used to restore, create, enhance, or maintain a riparian buffer that will provide protection of water quality that is equivalent to or greater than that provided by the riparian buffer that is lost;

3) Restoration or enhancement of an existing riparian buffer that is not otherwise required to be protected, or creation of a new riparian buffer, that will provide protection of water quality that is equivalent to or greater than that provided by the riparian buffer that is lost; and

4) Construction of an alternative measure that reduces nutrient loading as well as or better than the riparian buffer that is lost.

30-7-1.9 Additional Requirements in Lower Randleman Lake Watershed:

(A) Vegetated Conveyances: When the low density option is used in the GWA or the WCA of this watershed, stormwater runoff shall be transported primarily by vegetated conveyances. This shall be done to the maximum extent practicable in cluster developments.

(B) Minimization of Impacts of Built-Upon Area: To the extent that this can be accomplished consistent with other requirements of the Development Ordinance, built-upon area shall be minimized to the maximum extent practical through clustering and narrower and shorter paved areas (streets, driveways, sidewalks, and parking lots). Rooftop and other built-upon area runoff shall be spread over pervious areas.

(C) Land Clearing Limitation: Land clearing during the construction process shall be limited to the maximum extent practical.

(D) Deed Restrictions To Be Recorded: The developer shall record deed restrictions and protective covenants to ensure that development activities maintain the development consistent with the approved plans and specifications.

30-7-1.10 Activities Regulated by Other Governmental Agencies

(A) Designated Agencies: The following are the designated agencies responsible for implementing the requirements of the EMC Rules for the specified activities:

1) Agriculture - Guilford Soil and Water Conservation District

2) Silviculture - NC Division of Forest Resources

(B) Transportation: The North Carolina Department of Transportation shall comply with the practices outlined in its document entitled "Best Management Practices for the Protection of Surface Waters," which is incorporated by reference.

(C) Hazardous Materials:

1) The Greensboro Emergency Management Assistance Agency and the Guilford County Local Emergency Planning Committee (LEPC) are the designated management agencies responsible for implementing the provisions of this subsection pertaining to hazardous materials.

2) An inventory of all hazardous materials used and stored in the watershed shall be maintained. A spill/failure containment plan and appropriate safeguards against contamination are required. Waste minimization and appropriate recycling of materials is encouraged.

3) Properties in the WCA or GWA shall comply with the requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 302 Extremely Hazardous Substances (42 USC 11000 et seq.), or Section 311 of the Clean Water Act, as amended (CWA)(33 USC 1251 et seq.; oil and hazardous substances) if hazardous substances listed in either of these sections are stored or used on the site.

30-7-1.11 Density

(A) Density Limits: New development shall not exceed the density limits in Table 30-7-1-3 (Density Limits in Upper and Lower Randleman Lake Watersheds) or Table 30-7-1-4 (Density Limits in Other Water Supply Watersheds), whichever is applicable.

(B) Measurement in Low Density Option: For the low density option, density is measured in dwelling units per acre for single family detached residential development; for recreational facilities such as golf courses and tennis and swim clubs lying within such developments, measure the built-upon area on the lot or common area and divide by 3,000 square feet to obtain a dwelling units equivalency number.

Density is measured in percentage of the land surface covered by built-upon area for all other residential and nonresidential development. When buildings for single family detached residential uses and buildings for other uses are intermingled, the built-upon area measurement shall apply. When sections devoted to single family detached residential buildings and other sections devoted to buildings for other uses are present in the same development, the developer may apply the appropriate measurements to the different uses or may use the built-upon area measurement for the entire development. When using the built-upon area measurement, assume 3,000 square feet of built-upon area per single family detached residential lot to cover the built-upon area on the lot and in the portion of its driveway within the street right-of-way.

(C) Measurement in High Density Option: The built-upon area measurement shall apply.

TABLE 30-7-1-3 DENSITY LIMITS IN UPPER AND LOWER RANDLEMAN LAKE WATERSHEDS IN DWELLING UNITS PER ACRE & % BUILT-UPON AREA				
		Low Density Option		High Density Option
Watershed	Overlay Zone & Tier	DU/AC	%BUA	%BUA*
Lower Randleman Lake (WS-IV Critical Water Supply)	GWA	1***	12	50
	WCA,1	See BUA	0.5	no HD option
	WCA,2	0.2	2.4	no HD option
	WCA, 3 sewer	0.5	6	30
	no sewer	0.33	4	no HD option
	WCA, 4 sewer	1***	12	40
	no sewer	1***	12	no HD option
Upper Randleman Lake (WS-IV Critical Water Supply)	GWA	2**	24	70
	WCA,1	See BUA	0.5	no HD option
	WCA,2	0.2	2.4	no HD option
	WCA, 3 sewer	2**	24	34
	no sewer	0.33	4	no HD option
	WCA, 4 sewer	2**	24	40
	no sewer	1***	12	no HD option

*In a subdivision, the BUA maximum applies to the subdivision as a whole, including streets, lots, etc. The maximum BUA allowed by this column (assuming engineered stormwater controls are large enough) shall be allocated among streets, lots, etc. In single family detached development, the allocation to each house lot shall be uniform. In other development, the allocation may vary among lots. In all cases, the final plat shall clearly state each lot's allocation and restrictive covenants shall call attention to these allocations. On new or extended thoroughfare streets, allocate enough BUA to cover 5 foot sidewalks on both sides; and on all other new or extended streets allocate enough to cover a 5 foot sidewalk on one side.

**Alternatively, if total area minus area in street right-of-way, divided by number of house lots, equals 20,000 square feet or more, that is Low Density.

***Alternatively, if total area minus area in street right-of-way, divided by number of house lots, equals 40,000 square feet or more, that is Low Density.

In making determinations whether modification requests are minor or major, remember that all Greensboro's WCA Tier 4 and the portion of its Tier 3 lying more than 1/2 mile from normal pool elevation are beyond the minimum WCA required by EMC Rules.

TABLE 30-7-1-4 DENSITY LIMITS IN OTHER WATER SUPPLY WATERSHEDS IN DWELLING UNITS PER ACRE & % BUILT-UPON AREA				
		Low Density Option		High Density Option
Watershed	Overlay Zone & Tier	DU/AC	%BUA	%BUA*
Greensboro & Polecat Creek (WS-III)	GWA	2**	24	50 (70#)
	WCA,1	See BUA	0.5	no HD option
	WCA,2	0.2	2.4	no HD option
	WCA, 3 sewer	1***	12	30
	no sewer	0.33	4	no HD option
	WCA, 4 sewer	2**	24	40
	no sewer	1***	12	no HD option
Lake Macintosh (WS-IV)	GWA	2**	24	70
	WCA,1	See BUA	0.5	no HD option

	WCA,2	0.2	2.4	no HD option
	WCA, 3 sewer	2**	24	34
	no sewer	0.33	4	no HD option
	WCA, 4 sewer	2**	24	40
	no sewer	1***	12	no HD option

#Watershed plans approved after October 31, 1997, collectively covering up to 10% of the WS-III GWA, may receive allocations permitting up to 70% BUA. An approved watershed plan constitutes a completed application for such an allocation. An allocation is granted to a lot when a building permit is issued thereon and to a part of a subdivision when the engineered stormwater control structure for it has been substantially completed. An allocation is lost if the building permit or plat approval expires or is revoked.

*In a subdivision, the BUA maximum applies to the subdivision as a whole, including streets, lots, etc. The maximum BUA allowed by this column (assuming engineered stormwater controls are large enough) shall be allocated among streets, lots, etc. In single family detached development, the allocation to each house lot shall be uniform. In other development, the allocation may vary among lots. In all cases, the final plat shall clearly state each lot's allocation and restrictive covenants shall call attention to these allocations. On new or extended thoroughfare streets, allocate enough BUA to cover 5 foot sidewalks on both sides; and on all other new or extended streets allocate enough to cover a 5 foot sidewalk on one side.

**Alternatively, if total area minus area in street right-of-way, divided by number of house lots, equals 20,000 square feet or more, that is Low Density.

***Alternatively, if total area minus area in street right-of-way, divided by number of house lots, equals 40,000 square feet or more, that is Low Density.

In making determinations whether modification requests are minor or major, remember that all Greensboro's WCA Tier 4 and the portion of its Tier 3 lying more than 1/2 mile from normal pool elevation are beyond the minimum WCA required by EMC Rules.

TABLE 30-7-1-5
ENGINEER'S CERTIFICATION OF RUNOFF CONTROL

The engineer's certification is required on the stormwater control construction plan portion of the watershed development plan when a permanent stormwater quality control is proposed. The certification shall be of the following form:

<u>ENGINEER'S CERTIFICATION OF STORMWATER QUALITY CONTROL</u>
I certify that runoff from the first inch of rainfall from areas that are required to be controlled per Section 30-7-1.12 of the Greensboro Development Ordinance is controlled by a permanent engineered stormwater quality control that has been designed to meet or exceed the requirements in the Greensboro Stormwater Management Manual.
P.E. SEAL _____
SIGNATURE _____
DATE _____

TABLE 30-7-1-6
ENGINEER'S CERTIFICATION OF STORMWATER CONTROL COMPLETION

The engineer's certification, required according to Section 30-7-1.6 (B) of the Greensboro Development Ordinance and Section 27-22 (e) of the Stormwater Management Ordinance upon completion of permanent stormwater control structures, shall be of the following form:

<u>ENGINEER'S CERTIFICATION OF STORMWATER CONTROL COMPLETION</u>
I certify that the permanent stormwater control(s) labeled as _____ on this plat (or on (name of plat) as recorded in PB , PG in the Office of the Guilford County Register of Deeds) has been completed in conformance with the plans and specifications approved on (approval date), has its full design volume available, and is functioning as designed.
P.E. SEAL _____
SIGNATURE _____
DATE _____

30-7-1.12 Stormwater Quality Controls

(A) What Stormwater (Runoff) Is To Be Controlled: Where stormwater control is required by this Article, runoff from the following shall be controlled, and engineered stormwater controls and other best management practices (BMPs) shall be sized accordingly.

- 1) New built-upon area and other new development on the site (but see #4 below);
- 2) To the extent practicable, existing development on the site (consult with the Enforcement Officer for a determination);
- 3) Any other on-site runoff that happens to flow into the structure or BMP;
- 4) Any off-site runoff that happens to flow into the structure or BMP; if untreated built-upon area runoff from off the site is included, then the Technical Review Committee may permit control of that runoff to offset non-control of a lesser, modest amount of on-site built-upon area runoff that would be difficult to control.

(B) Methods of Stormwater Quality Control:

- 1) Developments using the high density option shall use engineered stormwater controls, which may consist of wet detention ponds or other alternative stormwater management systems consisting of other treatment options or a combination of options approved by the Director of the Division of Water Quality in accordance with 15A NCAC 2B.0104(g). The design criteria for approval shall include control of the first one inch (1") of rainfall and eighty-five percent (85%) total suspended solids (TSS) removal, as well as discharge rate.
- 2) Developments using the low density option, if they are required to have stormwater control, shall use either a method allowed under the high density option or, as applicable, a method prescribed in Section 30-7-2 or 30-7-3.